



Rotary Evaporator Manual
Model: RE-501
5L Rotary Evaporator Manual Lift



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1 Safety Instructions and Features

1.1 Safety Instructions

ONLY USE DISTILLED WATER IN THE WATER BATH. Any elements, sensors or switches damaged due to not using distilled water, WILL NOT BE COVERED UNDER WARRANTY.

The use of Personal Protection Equipment (PPE) is REQUIRED.

Follow all state, local and municipal laws, codes and ordinances.

Please make sure the power connection is correct and well-grounded. (see the technical parameters for details)

Cooling water line and vacuum line should be unobstructed without any hard bends in the run. Rotate and push forward to install water and vacuum lines.

If flammable or organic solvent is used, please make sure to clean any solvent immediately and take all fire safety precautions.

Apply a rag to wipe the glass parts clean after washing away stains; do not use hard objects against the glass.

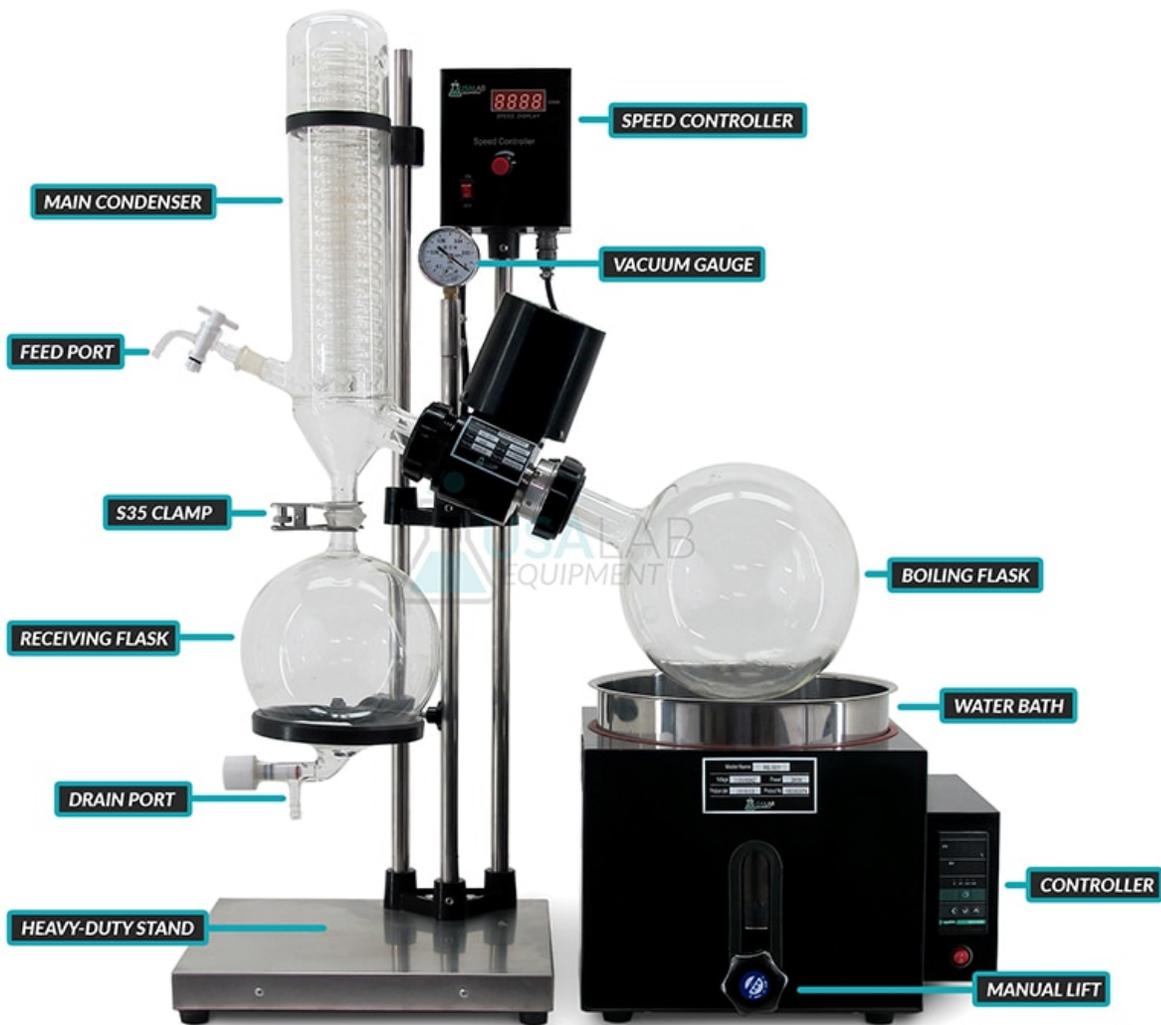
1.2 Purposes and features

RE-501 rotary evaporators are mainly used in the small-scale test and production of biological, pharmaceutical, chemical, food and other extractions. With 5L capacity and large-diameter rotary evaporating flasks. When it is placed in a water bath, it allows the solution to spread and evaporate rapidly. What's more, the product may be fitted with a multi-purpose water circulating vacuum pump, diaphragm vacuum pump, or low-temperature circulating vacuum pump, circulating cooler, constant-temperature circulator, low-temperature circulating pump to form a complete system. Teflon (PTFE) and rubber dual spin seals are included to ensure the highest vacuum pressure. Accurate and reliable temperature control system do not affect the vacuum and solution distillation. The system is capable of continuous distillation.

1.3 Technical Parameters

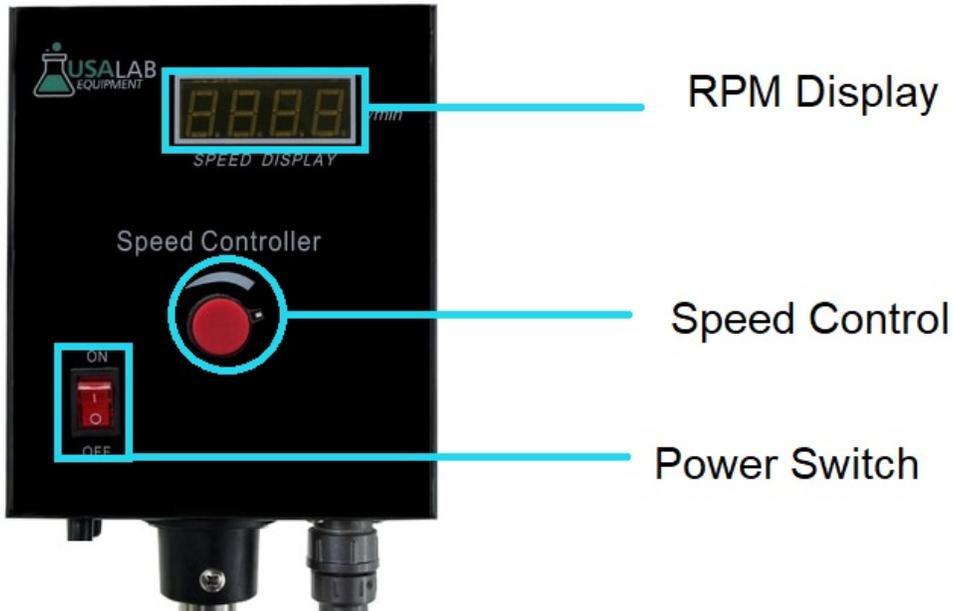
| | | |
|----------------|---|---------|
| Model | RE-501 | |
| Glass Material | GG-17 | 2 |
| Stand Material | Stainless steel | Diagram |
| Shell Material | Antisepsis plastic spraying 310*320*240mm | m |
| Bath Material | Stainless steel 225*245mm | |

Size c
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Collec
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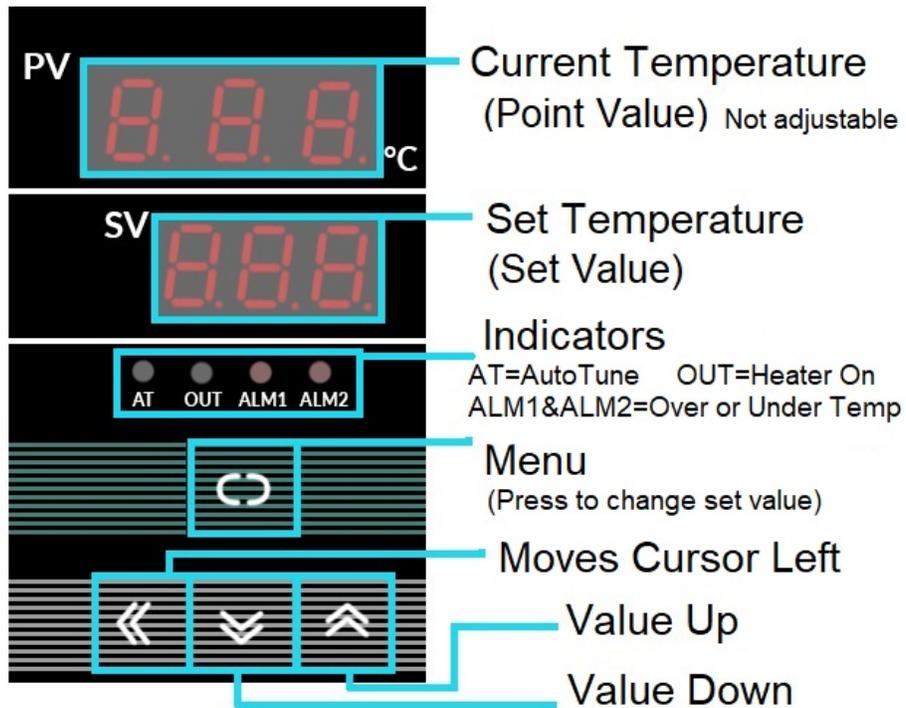


3 Control Panel Operation

3.1 Motor Controller



3.2 Temperature Controller



To set the temperature of the bath, Press the MENU button and then use the UP or Down arrows until the Set Value is reached. You can use the left arrow for large changes. Press MENU again to finalize the changes.

4 Preparing for Installation

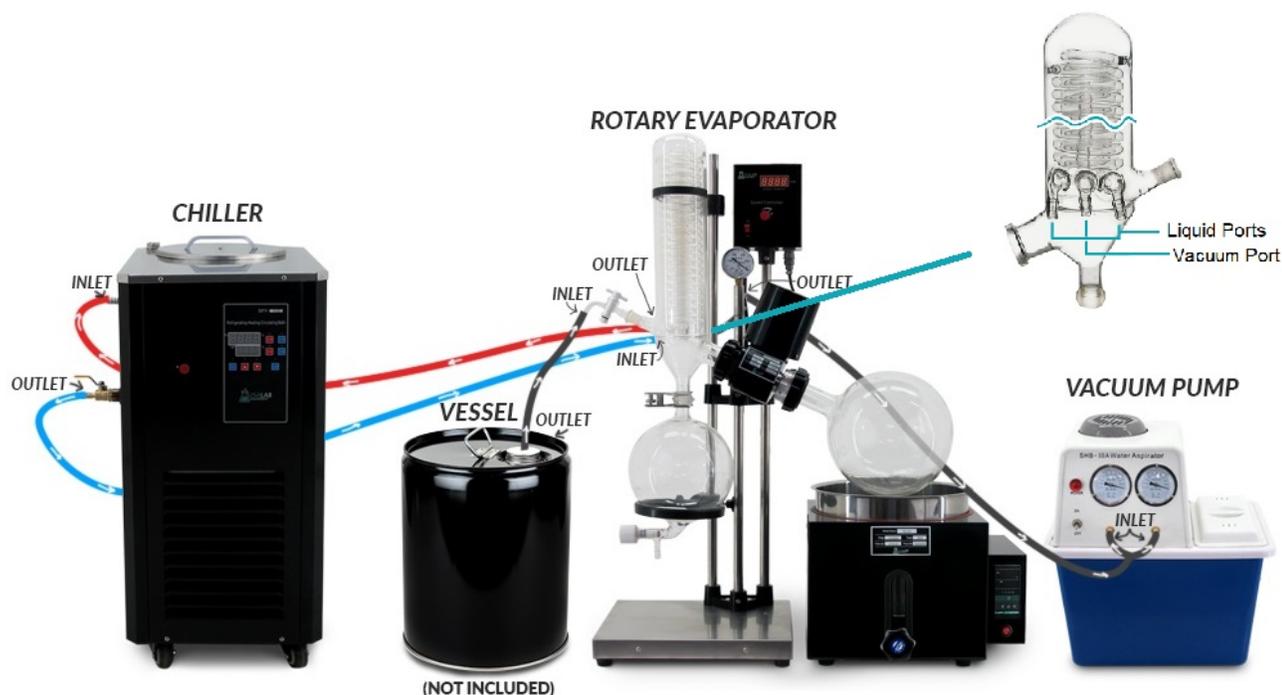
| RE-501 PACKING LIST | |
|---|--------|
| Stainless Steel 3 Bar Stand | 1 set |
| USA Lab Water Bath | 1 set |
| USA Lab RE-501 Motor | 1 set |
| USA Lab Speed Controller | 1 set |
| Main Condenser | 1 pc |
| 5L Boiling Flask | 1 pc |
| 3L Receiving Flask | 1 pc |
| Vapor Duct with Seal (Pre-Installed) | 1 set |
| PTFE Vacuum Sealing Kit (Pre-Installed) | 1 set |
| Glass Feeding Tube with PTFE Valve | 1 sets |
| PTFE Feeding Tube Extension Hose | 1 pc |
| Vacuum Gauge | 1 pc |
| Support Ring | 1 pcs |
| Rubber Strap for Condenser | 1 pc |
| 32A Fuse | 1 pc |
| 15A Fuse | 1 pc |
| Set Screw | 3 pcs |
| Allen Key | 1 pc |
| S35 Clamp | 1 pcs |
| 3 gram Packet of Vacuum Grease | 3 pcs |
| Vacuum Hose | 3ft. |

1. Please refer to the packing list above to check whether the components and parts are included. If there are any missing parts, please contact us immediately.
2. Remove any residue on the glass parts before assembly and keep the glass flange surfaces clean; apply vacuum grease to both sides of the seal ring gasket, ground joints and PTFE gaskets before the installation.
3. Tools that might be needed in the installation include: metric Allen wrenches and a screwdriver.
4. Two professionally installed 5-15 receptacles. (115V 15A 50/60Hz) One for the bath and one for the motor controller.

5 Installation

Precautions: Apply vacuum grease to all seals and ground joints. A properly greased ground joint should appear transparent. Refer to the diagram in section 2 for accurate installation.

1. Put base on a table, users can add four rubber feet if it is imbalanced.
2. Add the motor into it's bracket, adjust to 18.9° from the top of base. Tilt the motor clockwise 25° degrees and tighten the bracket.
3. Install the speed controller and vacuum gauge on the top of the stand according to the diagram.
4. Insert the glass condenser in left flange of motor head and tighten the collar. (Do not over tighten)
5. Put the feed valve into condenser after connecting the PTFE tube. (Heating may be required)
6. Put the receiving flask on to the bottom of the condenser using the S35 ground joint and clamp.
8. Add the boiling flask to the right of motor using the collar to tighten it. (Do not over tighten)
9. Put the water bath under boiling flask, and fill with distilled water 2/3 of the total volume.
10. Add the vacuum hose to the two ports on the bottom of the vacuum gauge, one goes to the vacuum port on the back of the condenser. The other goes to your vacuum pump or cold trap if you are using a rotary vane pump.
11. Add your water lines from your chiller to the condenser coil connections on the back of the condenser.



6 Water and vacuum tubing connections

7 Operation

7.1 Operating method

Run your vacuum pump and chiller before operating the rotary evaporator. Raise the bath to the level that your solution will be. Using a hose to the feed port valve the solution to be evaporated can be injected into the boiling flask (using the negative pressure of the evaporator to draw the liquid into the boiling flask). Once the solution is filled (no more than half-way ex. 50L boiling flask = 25L of solution). The temperature and rotation speed can be set and enabled. Once your receiving flask reaches 90%, you can break vacuum on your rotovap to drain the receiving flask.

7.2 Storage

For long periods, please shut off the power switch and disconnect the power. Empty the water bath, boiling flask, receiving flask and condenser coil(s) Allowing time to dry completely. Cover while in storage.

8 Maintenance

1. Please shut off the power switch and disconnect the power cord before any maintenance.
2. Please use damp soft cloth to wipe clean. Stubborn stains should be cleaned by neutral detergents.
3. The maintenance of internal electrical and heating parts must be preformed by professionals or trained electricians.
4. Do not directly splash water over the product or use abrasive powder, diluent, oil, kerosene, acidic material and similar substances during cleaning, or else shock or other accidents will occur.

9 Service

Our company provides free repairs for any product with failures due to manufacturing quality within 12 months after the date of delivery on the premise of normal operation by users. Reasonable repair costs will be charged for damage caused by improper use. After-sales service Tel : (734) 855-4890 or sales@usalabequipment.com

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Return Policy:

We offer a 30-day return policy from when your package is delivered to your shipping address. By placing an order with USA Lab, you express that you have read and agreed to the following return policies.

- We do not accept returns for customized items. When purchasing a customized item, you agree that there are no returns due to the nature of the item(s) being specific to your needs.
- By default, a 15% restocking fee is applied on all items that are in original packaging and unused with no damage. This applies to all items returned within 30 days. No exceptions. You will be responsible for the return shipment unless deemed defective by USA Lab. In that case, we will pay for return shipment and replacement shipment costs.
- The item(s) must be returned in original packaging and in undamaged condition. The item(s) must have no signs of usage or wear including stickers, scratches, dents, resins, non-standard fluids, plant matter, or any other wear not representing a new, unused item. Products deemed defective with any signs of usage or wear will result in a 25% restocking fee.
- Once the returned item is received, tested, inspected, and processed, a refund will be issued. If your item(s) are in original packaging and unused, you will be refunded the initial purchase price with the 15% restocking fee deducted. If your item(s) are deemed damaged or used, you will be refunded the initial purchase price with the 25% restocking fee deducted.